REMARKS

The Office Action and cited references have been reviewed. Claim 1 has been amended to correct an antecedent basis. This amendment does not change the scope of the claims. Claims 1-23 remain pending and are at issue herein.

35 U.S.C. §102 Rejections

The Examiner has rejected claims 1-7, 10-11, 15-16, and 20-21 under 35 U.S.C. § 102(e) as being anticipated by King (U.S. Patent No. 6,532,476). Reconsideration of this ground of rejection and allowance of claims 1-3, 5-8, 10-13, 15, and 17-36 in view of the foregoing amendments and the following remarks are respectfully solicited.

Claim 1 requires that a service discovery stream be converted into an N-ary tree. The Examiner is directed to page 2, lines 5-13 of the instant specification where it states that a service discovery stream is a linear stream of data that has data structures encoded within it to represent an available service on an enabled device. The data structures encoded within a service discovery stream are nil (null type), unsigned integer, signed twos-complement integer, universally unique identifier (UUID), text string, Boolean, data element sequence, data element alternative, and uniform resource locater (URL). A data element sequence is a data element whose data field is a sequence of data elements. A data element alternative is a data element whose data field is a sequence of data elements from which one data element is to be selected.

King has been thoroughly reviewed. King describes problems with database storage technologies (such as "relational storage" and "Multivalue storage") and teaches a method for the storage of variable size records that are capable of storing multidimensional data to an infinite level subject to operating system constraints. King teaches a non-persistent storage model that is used to structure the computer's memory to support the storage of any structure having any number of dimensions and storing any combination of types of information in a single entity. The fundamental basis of the persistent storage model of King is an entity known as a DynArray (Dynamic Array), which is also referred to as a database node. The nodes contain information of items in the database. King uses an example of defining city information by country, state, and county as items in the database. It is respectfully submitted that a node of a database is not is a linear stream of data that has data structures encoded within it to represent an available service on an enabled device. No teaching or

suggestion of converting a linear stream of data that has data structures encoded within it to represent an available service on an enabled device to an N-ary tree could be found in King.

Furthermore, as explained above, a data type is nil (null type), unsigned integer, signed twos-complement integer, universally unique identifier (UUID), text string, Boolean, data element sequence, data element alternative, or uniform resource locater (URL). Column 14, lines 49-61, of King teaches that a determination is made to find out if a node is a branch or a leaf. King teaches that a branch has other branches or leaves under them while a leaf does not have any branches or leaves under them. No teaching or suggestion could be found of determining whether a node is a nil (null type), an unsigned integer, a signed twos-complement integer, a universally unique identifier (UUID), a text string, Boolean, a data element sequence, a data element alternative, or a uniform resource locater (URL).

Therefore, in view of the above, it is respectfully submitted that King does not teach or suggest all of the elements of claim 1. It is therefore respectfully requested that the Examiner withdraw the rejection of claim 1.

Claims 2-7 depend from claim 1 and are believed to be patentable for the reasons set forth above with respect to claim 1. Additionally, claim 2 further requires the step of verifying the service discovery stream. Verifying the service discovery stream requires traversing the stream linearly to make sure it is a well-formed service discovery stream. No suggestion or teaching could be found in King to traverse any type of stream to make sure it is a well-formed stream. Furthermore, no teaching or suggestion could be found in King to perform the step of creating a stack.

With respect to claims 6 and 7, the Examiner states that column 13, lines 30-38 of King teach determining if the stream size of the next node is zero as required by claim 6 and determining if the data size is zero as required by claim 7. The Applicants respectfully disagree. Lines 30-35 of King, in conjunction with figure 20 of King, teach extracting a node from another node at a position y^x (position y in level x) where the leftmost position is position 1. If the node is a leaf node as that term is defined in King, lines 30-35 teach that a copy of the leaf is returned if the position being extracted is position 1. If the position being extracted is not position 1, a null pointer is returned. The null pointer does not mean that the data size of the next node is zero. Therefore, lines 30-35 of King do not teach determining if the stream size of the next node is zero or if the data size is zero. No suggestion or teaching could be found in King to determine if the stream size of the next node is zero or if the data size is zero.

In view of the foregoing, it is respectfully requested that the Examiner withdraw the rejection of claims 2-7.

The Examiner has stated that the language of claims 10-11, 15-16, and 20-21 is substantially the same as claims 1-6 and are therefore rejected on the same rationale as the rejection of claims 1-7. The Applicants respectfully disagree.

Claims 10-11, 15-16, and 20-21 are believed to be patentable for the reasons set forth above for claims 1-7. Furthermore, independent claim 10 recites the step of adding the first node to a tail of a list if the first node is a leaf node. No teaching or suggestion could be found in King to add a leaf node to a tail of a list.

Claims 11 and 16 recite the step of creating an array of nodes with the number of nodes equal to the first number of elements plus one. No teaching or suggestion could be found in King to create an array of nodes with the number of nodes equal to the first number of elements plus one.

In view of the foregoing, it is respectfully requested that the Examiner withdraw the rejection of claims 10-11, 15-16, and 20-21.

35 U.S.C. §103 Rejections

To establish a prima facie case of obviousness, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one skilled in the art, to modify the reference or combine teachings. Any proposed modification cannot render the prior art unsatisfactory for its intended purpose or change the principle of operation of a reference. There must be a reasonable expectation of success and the prior art references must teach or suggest all of the claim limitations. See MPEP 2143. Conclusory statements cannot be relied on when dealing with particular combinations of prior art and specific claims. The rationale for combining references must be put forth. *In re* Lee, 61 USPQ2^{d} 1430, 1433. The Examiner can satisfy the burden of showing obviousness of the combination "only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references."

The Examiner has rejected claims 8-9, 12-14, 17-19, and 22-23 under 35 U.S.C. § 103(a) as being unpatentable over King further in view of Housel, III (U.S. Patent No. 5,339,421). Reconsideration of this ground of rejection and allowance of claims 8-9, 12-14, 17-19, and 22-23 in view of the following remarks are respectfully solicited.

In the rejection, the Examiner states that the language of claims 12-14, 17-19, and 22-23 is substantially the same as previously rejected claims 1-6 and are rejected on the same

rationale. It is respectfully submitted that the Examiner meant to refer to claims 8-9 in the rejection and the response to the Examiner's rejections will proceed accordingly.

Claims 8-9 depend from claim 1 and are believed to be patentable for the same reasons set forth above for claim 1. Claims 12-14 depend from claim 10 and are believed to be patentable for the same reasons set forth above for claim 10. Claims 17-19 depend from claim 15 and are believed to be patentable for the same reasons set forth above for claim 15. Claims 22-23 depend from claim 20 and are believed to be patentable for the same reasons set forth above for claim 20.

In the rejection, the Examiner has merely stated what the Examiner believes Housel teaches and has not put forth any rationale for combining references as is required to put forth a prima facie case of obviousness. For this reason alone, it is respectfully requested that the Examiner withdraw the rejection of claims 8-9, 12-14, 17-19, and 22-23.

Furthermore, column 20, lines 26-37 of Housel teach pushing a group descriptor is pushed onto a stack. The group descriptor is used in a parser that decodes incoming data for handoff to an applications program and stores the decoded data in allocated storage areas. Each group descriptor defines a subset of other group or item descriptors and contains a group descriptor type identification that describes prescribed characteristics common to and necessary for encoding and decoding the data items identified by the item descriptors contained within the group descriptor. For group descriptors, Housel teaches that the FIRST field is a pointer to the first child descriptor of the group (which may be either an item descriptor of a group descriptor). The NEXT field is a pointer to the next sibling descriptor (i.e., same hierarchal level) of the group. The FLAGS field consists of a number of control bits defined for the particular descriptor. For example, one bit indicates whether or not the group is required or optional. Other bits indicate if length or repetition checking is to be performed and if an expression should be evaluated to compute the group's length or existence. No teaching or suggestion could be found in Housel to push a list head, a node, and a stream size into a stack as required by claim 8. With respect to claim 9, column 22, line 57 to column 23, line 8 of Housel teaches pushing a repeating group on the stack and saving the group length in the stack entry. No teaching or suggestion could be found to obtain a popped list head, the next node, and a popped stream size from a stack.
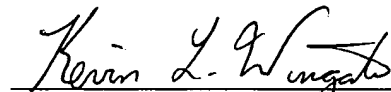
In view of the foregoing, it is respectfully requested that the Examiner withdraw the rejection of claims 8 and 9. Claims 12-14, 17-19, and 22-23 are believed to be patentable for the same reasons as claims 8 and 9 and it is therefore respectfully requested that the Examiner withdraw the rejection of claims 12-14, 17-19, and 22-23.

In re Appln. of Doron Holan et al.
Application No. 205513

Conclusion

      The application is considered in good and proper form for allowance, and the Examiner is respectfully requested to pass this application to issue. If, in the opinion of the Examiner, a telephone conference would expedite the prosecution of the subject application, the Examiner is invited to call the undersigned attorney.

Respectfully submitted,

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